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1645

#8  
Dmt  
5-5-03

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/843,250

DATE: 03/04/2002 TIME: 15:02:39

TIME: 15:02:39

Input Set : A:\09-843250 Sequence Listing.txt  
Output Set: N:\CRF3\03042002\I843250.raw

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/843,250

DATE: 03/04/2002  
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Input Set : A:\09-843250 Sequence Listing.txt  
Output Set: N:\CRF3\03042002\I843250.raw

57	ttcgcaaaac	ggcaagaaaat	atcaatcaag	agatagtgat	ctgctttcaa	accttggttt	1380										
58	cggtagggac	gtatacggcg	acgcggctta	tccaggcgctc	gtcggcaaat	cggcgatcg	1440										
59	cgagaccgt	tatcggttt	tatccgggc	ttaccaggca	cacgtcagca	gctccaactg	1500										
60	ggctgagttc	gagcatgcct	ctagtaacttg	gcataactgaa	tttacgaaga	ctactgatcg	1560										
61	ctaacagacg	agtcgaccat	gatgatcaat	attcaagaag	acaagctgg	ttccgcccac	1620										
62	gacgcccgaag	agattctcg	tttcttcaat	tgccacgact	ctgctttgca	acaagaagcc	1680										
63	actacgctgc	tgaccaggaa	agcgcatttg	ttggacattc	aggcttaccg	tgcttggta	1740										
64	gagcaactg	tggggtcaga	ggtgcaatat	caggtcattt	cacgcgaact	gcgcgcagct	1800										
65	tcagagcg	gttataagct	caatgaagcc	atgaacgttt	acaacgaaa	ttttcagcaa	1860										
66	ctgaaagtcc	gagttgagca	tcaactggat	ccgcaaaact	ggggcaacag	cccgaagctg	1920										
67	cgccttactc	gttttatcac	caacgtccag	gccgcaatgg	acgtaaatga	caaagagcta	1980										
68	cttcacatcc	gttccaaacgt	cattctgcac	cgggcacgac	gtggcaatca	ggtcgatgtc	2040										
69	ttctacggcg	cccgggaaga	taaatggaaa	cgtggcgaag	gtggagtacg	aaaattggtc	2100										
70	cagcattcg	tcgattaccc	agagcgcata	tttcagacgc	acaatctgtat	ggtctttctg	2160										
71	tgattcagtg	accattttta	caaataggta	ctgcaaccgc	ggtcaccatt	aatcaaagg	2220										
72	aatgtacgtg	tatgggcaat	caacaagtgc	tttcgataac	cggtg		2265										
74	<210>	SEQ ID NO:	2														
75	<211>	LENGTH:	449														
76	<212>	TYPE:	PRT														
77	<213>	ORGANISM:	Artificial Sequence														
79	<220>	FEATURE:															
80	<223>	OTHER INFORMATION:	A polypeptide encoded by SEQ ID NO:1														
82	<400>	SEQUENCE:	2														
83	Met	Asn	Tyr	Asn	Asn	Lys	Ile	Leu	Val	Ser	Glu	Ser	Gly	Leu	Ser	Gln	
84	1				5				10					15			
85	Lys	His	Leu	Ile	His	Gly	Asp	Glu	Glu	Leu	Phe	Gln	His	Glu	Leu	Lys	
86					20				25					30			
87	Thr	Ile	Phe	Ala	Arg	Asn	Trp	Leu	Phe	Leu	Thr	His	Asp	Ser	Leu	Ile	
88					35				40					45			
89	Pro	Ala	Pro	Gly	Asp	Tyr	Val	Thr	Ala	Lys	Met	Gly	Ile	Asp	Glu	Val	
90					50				55					60			
91	Ile	Val	Ser	Arg	Gln	Asn	Asp	Gly	Ser	Ile	Arg	Ala	Phe	Leu	Asn	Val	
92					65				70					75			80
93	Cys	Arg	His	Arg	Gly	Lys	Thr	Leu	Val	Ser	Val	Glu	Ala	Gly	Asn	Ala	
94					85				90					95			
95	Lys	Gly	Phe	Val	Cys	Ser	Tyr	His	Gly	Trp	Gly	Phe	Gly	Ser	Asn	Gly	
96					100				105					110			
97	Glu	Leu	Gln	Ser	Val	Pro	Phe	Glu	Lys	Asp	Leu	Tyr	Gly	Glu	Ser	Leu	
98					115				120					125			
99	Asn	Lys	Lys	Cys	Leu	Gly	Leu	Lys	Glu	Val	Ala	Arg	Val	Glu	Ser	Phe	
100					130				135					140			
101	His	Gly	Phe	Ile	Tyr	Gly	Cys	Phe	Asp	Gln	Glu	Ala	Pro	Pro	Leu	Met	
102					145				150					155			160
103	Asp	Tyr	Leu	Gly	Asp	Ala	Ala	Trp	Tyr	Leu	Glu	Pro	Met	Phe	Lys	His	
104						165				170					175		
105	Ser	Gly	Gly	Leu	Glu	Leu	Val	Gly	Pro	Pro	Gly	Lys	Val	Val	Ile	Lys	
106						180				185					190		
107	Ala	Asn	Trp	Lys	Ala	Pro	Ala	Glu	Asn	Phe	Val	Gly	Asp	Ala	Tyr	His	
108						195				200					205		

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/843,250

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Input Set : A:\09-843250 Sequence Listing.txt  
Output Set: N:\CRF3\03042002\I843250.raw

109 Val Gly Trp Thr His Ala Ser Ser Leu Arg Ser Gly Glu Ser Ile Phe  
110 210 215 220  
111 Ser Ser Leu Ala Gly Asn Ala Ala Leu Pro Pro Glu Gly Ala Gly Leu  
112 225 230 235 240  
113 Gln Met Thr Ser Lys Tyr Gly Ser Gly Met Gly Val Leu Trp Asp Gly  
114 245 250 255  
115 Tyr Ser Gly Val His Ser Ala Asp Leu Val Pro Glu Leu Met Ala Phe  
116 260 265 270  
117 Gly Gly Ala Lys Gln Glu Arg Leu Asn Lys Glu Ile Gly Asp Val Arg  
118 275 280 285  
119 Ala Arg Ile Tyr Arg Ser His Leu Asn Cys Thr Val Phe Pro Asn Asn  
120 290 295 300  
121 Ser Met Leu Thr Cys Ser Gly Val Phe Lys Val Trp Asn Pro Ile Asp  
122 305 310 315 320  
123 Ala Asn Thr Thr Glu Val Trp Thr Tyr Ala Ile Val Glu Lys Asp Met  
124 325 330 335  
125 Pro Glu Asp Leu Lys Arg Arg Leu Ala Asp Ser Val Gln Arg Thr Val  
126 340 345 350  
127 Gly Pro Ala Gly Phe Trp Glu Ser Asp Asp Asn Asn Met Glu Thr  
128 355 360 365  
129 Ala Ser Gln Asn Gly Lys Lys Tyr Gln Ser Arg Asp Ser Asp Leu Leu  
130 370 375 380  
131 Ser Asn Leu Gly Phe Gly Glu Asp Val Tyr Gly Asp Ala Val Tyr Pro  
132 385 390 395 400  
133 Gly Val Val Gly Lys Ser Ala Ile Gly Glu Thr Ser Tyr Arg Gly Phe  
134 405 410 415  
135 Tyr Arg Ala Tyr Gln Ala His Val Ser Ser Ser Asn Trp Ala Glu Phe  
136 420 425 430  
137 Glu His Ala Ser Ser Thr Trp His Thr Glu Leu Thr Lys Thr Thr Asp  
138 435 440 445  
139 Arg  
142 <210> SEQ ID NO: 3  
143 <211> LENGTH: 9841  
144 <212> TYPE: DNA  
145 <213> ORGANISM: Artificial Sequence  
147 <220> FEATURE:  
148 <223> OTHER INFORMATION: A modified DNA molecule encoding valine at the  
149 position corresponding to the F352 amino acid in  
150 NDO.  
152 <400> SEQUENCE: 3  
153 gaattccatca ggaagacatt caaatgaacg taaaataaa gggcagcgctc tggatggcg 60  
154 gcagcgaaat gctccctaaa ttccctcattt accccatctg aggattgctt tatgacagta 120  
155 aagtggattt aagcagtgc tctttctgac atccttgaag gtgacgtcct cggcggtact 180  
156 gtcgagggca aggagctggc gctgtatgaa gttgaaggcg aaatctacgc taccgacaac 240  
157 ctgtgcacgc atggttccgc cccatgagt gatggttatc tggaggtag agaaatcgaa 300  
158 tgcccccttc atcaaggtcg gtttgacgtt tgcacaggca aagccctgtg cgcacccgtg 360  
159 acacagaaca tcaaaaacata tccagtcaag attgagaacc tgcgcgtaat gattgatttg 420  
160 agctaagaat tttaacagga ggcaccccg gcccctagac gtaatcaccc ccattccatc 480  
161 ttttttaggt gaaaacatga attacaataa taaaatctt gtaagtgaat ctggctgag 540

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/843,250

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Input Set : A:\09-843250 Sequence Listing.txt  
Output Set: N:\CRF3\03042002\I843250.raw

162	ccaaaagcac	ctgattcatg	gcatgaaaga	actttccaa	catgaactga	aaaccatttt	600
163	tgcgcggAAC	tggcttttc	tcactcatga	tagcctgatt	cctgcccccg	gcgactatgt	660
164	taccgaaaaa	atggggattg	acgaggtcat	cgtctccgg	cagaacgacg	gttcgattcg	720
165	tgctttctg	aacgttgcc	ggcatcgtgg	caagacgctg	gtgagcgtgg	aagccggcaa	780
166	tgccaaaggT	tttggttgca	gctatcacgg	ctggggcttc	ggctccaacg	gtgaactgca	840
167	gagcgttcca	tttggaaaaag	atctgtacgg	cgagtcgctc	aataaaaaat	gtctggggtt	900
168	gaaaagatc	gctcgcgtgg	agagcttcca	tggcttcata	tacggttgct	tcgaccagga	960
169	ggcccccct	cttatggact	atctgggtga	cgctgctgg	tacctgaaac	ctatgttcaa	1020
170	gcattccggc	gttttagaac	tggtcggtcc	tccaggcaag	gttgtatca	aggccaactg	1080
171	gaaggcaccc	gcggaaaact	tttggggaga	tgcataaccac	gtgggttgg	cgcacgcgtc	1140
172	ttcgcttcgc	tcggggaggt	ctatcttc	gtcgctcgct	ggcaatgcgg	cgctaccacc	1200
173	tgaaggcgca	ggcttgcaaa	tgacctccaa	atacggcagc	ggcatgggtg	tgttgtggg	1260
174	cggatattca	ggtgtgcata	gcccagactt	gttccggaa	ttgtatggcat	tcggaggcgc	1320
175	aaagcaggaa	aggctgaaca	aagaaattgg	cgatgttcgc	gctcggattt	atcgacgcca	1380
176	cctcaactgc	accgtttcc	cgaacaacag	catgctgacc	tgctcgggtg	tttcaaaagt	1440
177	atggaacccg	atcgacgca	acaccacca	ggtctggacc	tacgcatttgc	tgcggaaaaga	1500
178	catgccttag	gatctcaagc	gccgcttgc	cgactctgtt	cagcgaacgg	tcgggcctgc	1560
179	tggcttctgg	gaaagcgcacg	acaatgacaa	tatggaaaca	gcttcgcaaa	acggcaagaa	1620
180	atataatca	agagatagtg	atctgtttc	aaaccttgg	ttcggtgagg	acgtataacgg	1680
181	cgacgcggtc	tatccaggcg	tcgtcgccaa	atcgccgatc	ggcgagacca	gttatcggt	1740
182	tttctaccgg	gcttaccagg	cacacgtcag	cagctccaa	tggctgttgt	tcgagcatgc	1800
183	ctctagtagt	tggcatactg	aacttacgaa	gactactgt	cgctaacaga	cgagtcgacc	1860
184	atgatgatca	atattcaaga	agacaagctg	gttccggcc	acgacgcgcga	agagattctt	1920
185	cgtttcttca	attgcccacga	ctctgttttgc	caacaagaag	ccactacgct	gctgaccagg	1980
186	gaagcgcatt	tgttggacat	tcaggcttac	cgtgttttgt	tagagcactg	cggtgggtca	2040
187	gagggtcaat	atcaggtcat	ttcacgcgaa	ctgcgcgcag	tttcagagcg	tcgttataag	2100
188	ctcaatgaag	ccatgaacgt	ttacaacgaa	aattttcagc	aactgaaagt	tcgagttgag	2160
189	catcaactgg	atccgaaaaa	ctggggcaac	agcccgaaagc	tgcgcttac	tcgttttac	2220
190	accaacgtcc	aggccgcaat	ggacgtaaat	gacaaagagc	tacttcacat	ccgctccaac	2280
191	gtcattctgc	accgggcacg	acgtggcaat	caggctcgatg	tcttctacgc	cgccccggaa	2340
192	gataaatgg	aacgtggcga	aggtggagta	cgaaaattgg	tccagcgatt	cgtcgattac	2400
193	ccagagcgc	tacttcagac	gcacaatctg	atggcttttgc	tgtgatttgc	tgaccatttt	2460
194	tacaatgg	cactgcaacc	gcccgtcacca	ttaatcaaag	ggaatgtacg	tgtatggca	2520
195	atcaacaagt	cgtttcgata	accgggtcag	gctcaggaat	cggtctcgaa	ctgtttcggt	2580
196	ccttaagt	ggccgggttat	tacgtatccg	ctctcgatc	aaacgaggag	caagaggcgc	2640
197	ttctttgc	aaagttcaag	gacgcactcg	agattgttgt	gggcgatgtc	cgggaccacg	2700
198	caacaaatga	gaagctgata	aagcaaacaa	tcgatagatt	cggtcatctt	gattgtttt	2760
199	ttgcaatgc	cggtatctgg	gattacatgc	tgagcatcga	agagccttgg	gagaaaat	2820
200	cgagcagtt	tgacgaaata	ttcgacatta	atgtcaagag	ctatttcagt	ggcatcagt	2880
201	ccgcctgc	ggaactgaaa	aagactaacg	gatcagtgg	gatgaccgt	tcgggtgcgt	2940
202	cccatcggt	cggtgggtgt	ggttcttgc	acatcgccag	caagcatcg	gtgtcggt	3000
203	tggtaaggc	tttggcttac	gaattggccc	ccgaagttcg	cgtgaacgt	gtttcgccgg	3060
204	ggggcaccgt	gacgtctctg	tgcggtcccg	cgagcgcgg	tttcgacaaa	atgcacatga	3120
205	aagacatgcc	cggcatcgac	gatatgatca	aaggcttcac	gcctcttgg	tttgcagcca	3180
206	agcccgaaaga	cgtggtgca	ccctattttgt	tgctggcttgc	gcaagacaa	ggaaaattca	3240
207	tcacccggcac	cgtgatttagc	attgtggcg	gtatggcgct	cggtcgcaag	tgagcttgc	3300
208	gccgatcaga	agttatagac	acatttcagg	tgacgccccca	tgaagacaaa	actgtttatc	3360
209	aataacgcct	ggatcgattc	tagtggccag	cagaccttcg	agcgcataca	ccccgtcagc	3420
210	agcgatgtgg	tgactgagag	cgaaacgccc	acagtgcacgg	acgcgataaa	ggcggcgcaaa	3480

RAW SEQUENCE LISTING  
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211	gcggccgagg	aggcgtaa	gaccttggaa	gccgttggac	cttcagagcg	tcgcccgc	3540	
212	ctcctaaagg	tcgcccgtgt	catggaaagt	aaaacaccca	agttcatcg	agtgtatggcc	3600	
213	atggaggtgg	gagcttccgc	ccttgggc	ggattcaacg	tccatgcgtc	tgccaatgtg	3660	
214	ttccgagagg	ctgcctcgct	ggctacccaa	attcagggtg	aaaccatccc	aacggacaaa	3720	
215	gccgaaacgc	tctcaatgac	actacgtcag	ccggtcggcc	cgatcctaag	catcggttcca	3780	
216	tggaacggca	ccgcagtgt	tgcggcacga	gccatcgctt	atccgctgtt	ctgtggcaac	3840	
217	actgtgtgt	tcaaaggctc	tgaatttagt	cccgcgacgc	atgcctgtat	cacccagtgc	3900	
218	gtgcaggaag	ccgggctgccc	cgctggcg	ctcaattacc	tcaacttcc	gcctgaccgt	3960	
219	tcgcccggaga	tcgctgacgc	actgtatctt	gccaaggaga	tccgccc	caacttcacg	4020	
220	ggttccaccc	gcgtgggcag	cattatcg	cagaaagccg	cgcaacacct	caagcgctgc	4080	
221	ctgctggagc	tcggggc	aa	gtcccgctt	atgtatgcaga	catcgatgcg	4140	
222	gcggtaagg	cagcggtgtt	cggtagctt	ctgttccaa	gtcagatctg	catgtccact	4200	
223	gagcgcttga	tcgttcatgt	gaagatagcc	gacgaattt	tcgaaaatt	tgtcgaaaaaa	4260	
224	actaagcgct	tgagcgcagg	cgacc	cg	gtactggcg	actgcacat	cgccccat	4320
225	gtctcgccaa	attcggttga	gccccat	ggttgttca	aagacgcgat	cgacaaagg	4380	
226	gcaaaagttt	tttgcggcgg	cttggccaa	ggtgcgtca	tgccggcc	ac	4440	
227	cacgtcaaat	ctgacatgcg	gatttacgt	gaggagac	ttggtccat	caccgtggta	4500	
228	atccgttgt	aaggcgaagc	agaggccgtc	cgcatt	acgacagcg	ctatggcctg	4560	
229	tgcgtggc	tat	ttggcc	cgacatca	gcgtgg	gtccatcgaa	4620	
230	tatggttct	tacacatcaa	cggttgc	acc	gtccaga	aggcgcagg	4680	
231	ggcaccaaga	acaccggcta	cgggcg	cttc	gacggccgt	ctgtatcg	4740	
232	gagatcaagt	ggctgaccat	cgAACCTTC	gagcagcaat	atcccttct	ataagcacta	4800	
233	actcccagg	atcaaactat	gagtaagc	aa	gctgcagtt	tcgagctcg	atacatgg	4860
234	atctcggtca	aggaccctga	tgcgtggaa	tt	tcatttgc	cgatatgt	aggtctgc	4920
235	gttcttgat	agggtgagaa	ggaccgtt	tc	tatcgc	tggtact	gcacatcg	4980
236	atcgtagtcc	atcacaacgg	acaggacgac	ttggagt	tac	taggctggcg	tgtagccgg	5040
237	aagccggagt	tcgaagctt	gggtcaaa	at	tattgt	ccgg	tacaa	5100
238	tgcacaa	ttgaggctca	ggagcgtat	gtgttgg	tc	tgatgaagac	agaagatccg	5160
239	ggcggcaacc	cgaccgagat	attctggg	ccc	ccgat	acatgag	cccg	5220
240	cccggtcgcc	ccctgcacgg	aaagttgt	accgg	tgacc	aaggcttgg	ccattgc	5280
241	gttcgc	aaa	ccgacgtc	g	agaagct	tat	tttgc	5340
242	gacgtcgaat	accggattcc	gttgc	ccac	ggcatgact	ccgaact	gttcatgc	5400
243	tgcaacgccc	gtgatcact	cattgc	ttt	gttgc	ccgctg	ccaa	5460
244	cacttgc	ttgagt	acacatg	gaa	gacttgg	acacgc	acac	5520
245	aagaacgaa	ttgacattgc	cttgc	agc	tttgc	ccaa	acac	5580
246	ttctatgg	caacgc	cttgc	ggc	tttgc	gg	ggc	5640
247	atagatgaag	cgagat	tttgc	ggc	at	ggc	actg	5700
248	tatggctt	atgtaaaact	gagctaa	aa	tg	ggc	gagg	5760
249	gcatcttcat	acgcaaccaa	ccttgc	agg	gt	ggc	tttgc	5820
250	ggaagtgg	cgggccatgc	gcatacc	gat	tttgc	tttgc	atagtg	5880
251	gataggtgaa	tcaagcg	tttgc	tttgc	at	tttgc	at	5940
252	tatctattca	aaacaagaat	aataat	agg	tttgc	tttgc	at	6000
253	tgtctgtt	atccttatt	cttgc	ggc	at	ggc	cc	6060
254	acgtaccgt	ttggat	taatgt	at	tc	ggc	aaa	6120
255	ggtcagcgg	tgccagg	aagcgt	gt	cgat	ggc	aa	6180
256	ttcggctac	ccatcaac	ccat	gg	gt	ggc	tttgc	6240
257	actaaagtga	cgggcgc	cacactt	cc	gt	ggg	aaat	6300
258	ccaacagtat	taacgtt	gaa	cc	gt	ggg	aaat	6360
259	ggtgcgg	g	tc	cc	gt	ggg	tttgc	6420

Use of n and / or Xaa has been detected in the Sequence Listing. Review the Sequence Listing to ensure a corresponding explanation is present in the <220> to <223> fields of each sequence using n or Xaa.

**VERIFICATION SUMMARY**

PATENT APPLICATION: US/09/843,250

DATE: 03/04/2002

TIME: 15:02:40

Input Set : A:\09-843250 Sequence Listing.txt

Output Set: N:\CRF3\03042002\I843250.raw

L:569 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6

L:2069 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19